

Remarks/Arguments

Reconsideration of this application is requested.

Extension of Time

A request for a three month extension of the period for response to the Office Action mailed on January 25, 2006 is enclosed. The extended period for response expires on July 25, 2006.

Claim Status

Claims 1-13, 15 and 17-19 were presented. Claims 4, 8, 12 and 17 are amended. Claim 7 is canceled, without prejudice. Thus, claims 1-6, 8-13, 15 and 17-19 are now pending.

Allowable Subject Matter – Claim 11

Although the cover page of the Action indicates that claims 1-13, 15 and 17-19 are rejected, as in the previous Action, the Action *again* provides no grounds for rejection of claim 11 or citation of any references against claim 11. Accordingly, applicant assumes that claim 11 is considered to include allowable subject matter, and respectfully requests an indication to that effect.

Alternatively, applicant requests issuance of another non-final action setting forth grounds for rejection of claim 11 so that applicant has a full and fair opportunity to respond to such rejection. To date, applicant has not been apprised of any grounds for rejection of claim 11, and has therefore had no opportunity to respond to the supposed rejection of claim 11.

Claim Rejections – 35 USC 102

Claims 4, 6, 12, 13, 15, 17 and 19 are rejected under 35 USC 102(b) as anticipated by Du (US 6,107,938). In response, independent claims 4, 12 and 17 are amended to clearly distinguish over Du. In particular, claims 4, 12 and 17 are amended to recite that the bandpass filter passes light falling within a range of about 920nm to about 980nm.

The Action acknowledges, in its rejections of claims 1, 2 and 7-10 that Du fails to disclose this feature. Since Du does not disclose each and every feature of

claims 4, 12 and 17, it cannot anticipate claims 4, 12 and 17 or claims 6, 13, 15 and 19 dependent thereon. Accordingly, the rejections of claims 4, 6, 12, 13, 15, 17 and 19 under 35 USC 102(b) must be withdrawn. Moreover, as discussed below with respect to claims 1 and 7, claims 4, 6, 12, 13, 15, 17 and 19 are also not rendered obvious by Du and Goto.

Claim Rejections – 35 USC 103

Claims 1-3 and 7-10

Claims 1 and 2 are rejected under 35 USC 103(a) as obvious over Du in view of Goto (US 6,677,259). Claim 3 is rejected as obvious over Du in view of Goto and Solomon (US 3,725,888). Claims 7-10 are rejected as obvious over Du in view of McGuire (US 6,114,684) and Goto.

Claim 1 recites the specific characteristics of a bandpass filter that enable it to pass home and office infrared control signals while rejecting all other signals outside this band: the bandpass filter is configured to have a center wavelength falling within the range of about 920nm to about 980nm; an 80 percent bandwidth of approximately 10nm; and a 50 percent bandwidth of approximately 20nm (as amended). As discussed at pages 7-8 of applicant's specification, the inventors have found that a significant number of infrared transmitters employed in numerous home and office appliances employ infrared signals having center wavelengths in this range. Importantly, other appliances such as plasma televisions emit intense infrared radiation at frequencies just outside this range and must be blocked. Thus, it is important that the bandpass filter be discriminating and narrowly defined.

As pointed out in applicant's previous amendment, the filter of Goto has a wavelength range of 950nm to 1600nm. Each of applicant's independent claims 4, 12 and 17, as amended, now requires a different and narrower range of 920nm to 980nm. The limitations of claim 7 have been added to claim 4, and claim 7 is therefore canceled, without prejudice. The discussion below is intended to apply equally to claims 4, 12 and 17, as amended, as well as to claims 1-3 and 8-10.

As has been previously discussed, a range of 920nm to 980nm has been found by the inventors to be critical for admitting the infrared control signals while excluding interfering and closely neighboring signals such as plasma infrared radiation. Goto's disclosed range completely excludes the lower half (920nm-950nm) of applicant's range, and thus would exclude half of the potential range of infrared control signals that should be passed through the filter. Accordingly, Goto's filter would render applicant's system inoperable for all infrared transmitters and devices in the lower half of the range. Moreover, Goto's filter would admit a wide range (980nm-1600nm) of potentially interfering signals, which is precisely the problem that applicant's narrower range, discriminating filter addresses.

In addition, the Action asserts that Goto, in the abstract and col. 3, line 63 to col. 4, line 5, discloses an 80 percent bandwidth no less than about 10nm wide and a 50 percent bandwidth no less than about 20nm. Applicant *again* notes that it has amended claims 1, 4, 8 and 9 to require a 50% bandwidth of *approximately or about* 20nm and an 80 percent bandwidth of *approximately or about* 10nm. Yet, the Action continues to improperly base rejections on the previous claim language of "no less than".

Moreover, as previously argued, Goto does not contain the disclosure asserted by the Action. As discussed in applicant's paragraph [0032] and Fig. 5, applicant's claim limitations are directed to transmission intensity percentage as a function of wavelength range. The referenced portion of Goto, by contrast, states that "light transmittance of 60% or over *for plate thickness of 10mm* is required for this wavelength range". Thus, Goto is discussing light transmittance for a given plate thickness, and not transmission intensity percentage as a function of wavelength range.

Applicant again traverses the suggestion that the claimed characteristics of applicant's filter are "merely an engineering design choice". Applicant investigated the industry-wide problem of IR control system malfunctions in the presence of plasma screens, and developed an IR receiver product with precise bandwidth range

and filter characteristics that solved the plasma screen interference problem. The specific and discriminating range developed and claimed by applicant is required, and anything outside of this range will result in a non-functional filter. The range disclosed by Goto, as discussed above, is completely inadequate for solving the issues addressed by applicant and will result in a product that does not solve, and in fact exacerbates, the problem solved by applicant. Interfering frequencies will be admitted by Goto's filter, while needed frequencies that should be passed will be blocked.

The Action, at page 8, in its "Response to Arguments", states that "Applicant's arguments...have been considered but are moot in view of the new ground(s) of rejection". Applicant disagrees. The Action continues to rely on Goto for rejection of the critical element of applicant's claims, and applicant's arguments with respect to this reference are therefore not moot and are entitled to consideration and response by the Examiner. Applicant has pointed out substantial defects of Goto, relative to the present invention, both above and in applicant's previous response. Applicant is entitled to and respectfully requests a response.

With respect to claim 3, Solomon is cited for its disclosure of an amplifier that responds to certain frequencies, and does not remedy the deficiencies of Du and Goto discussed above.

For these reasons, the rejections under 35 USC 103(a) of claims 1-3 and 8-10 should be withdrawn. Moreover, applicant again notes that it has amended independent claims 4, 12 and 17 to include the bandwidth range relied on in distinguishing over Goto. All claims of the application now include this range, and all claims are therefore not anticipated or obvious over the references of record.

Claims 5 and 18

Claims 5 and 18 are rejected under 35 USC 103(a) as obvious over Du in view of McGuire (US 6,114,684). McGuire is cited for its disclosure of a plurality of photodiode detectors, but does not cure the deficiencies of Du discussed above. McGuire is directed to lasers and in particular a system for jamming a laser

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listening device. Du and McGuire, taken alone or in combination, do not disclose or suggest an infrared communication system utilizing a discriminating, bandpass filter passing the particular frequency range as claimed by applicant. The rejections of claims 5 and 18 under 35 USC 103(a) should accordingly be withdrawn.

Conclusion

This application is now believed to be in condition for allowance. The Examiner is invited to telephone the undersigned to resolve any issues that remain after entry of this amendment. Any fees due with this response may be charged to our Deposit Account No. 50-1314.

Respectfully submitted,
HOGAN & HARTSON L.L.P.

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By: _____

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